

**In the Claims:**

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- 2       A)    Claims 1—13, 15—17 and 19—25 remain in their original form.
- 3       B)    Claim 14 is currently amended.
- 4       C)    Claims 18 and 26 are currently cancelled.
- 5       D)    Claims 27—31 are new.
- 6

7       1.    (Original)   A transaction processing system comprising:

8           a database writer configured to process data in accordance with one or more

9           transactions within the transaction processing system;

10          a transaction monitor for monitoring transactions within the transaction

11          processing system;

12          a log writer for maintaining audit trail data associated with transactions

13          within the transaction processing system; and

14          one or more non-disk persistent memory units associated with the log

15          writer and configured to receive, from the log writer, audit trail data.

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17       2.    (Original)   The transaction processing system of claim 1, wherein

18       the log writer comprises a primary audit disk process and a backup audit disk

19       process.

20

21       3.    (Original)   The transaction processing system of claim 1, wherein

22       said one or more non-disk persistent memory units comprises a primary non-disk

23       persistent memory unit and a mirror non-disk persistent memory unit.

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1           4.     (Original)   The transaction processing system of claim 1, wherein  
2     said one or more non-disk persistent memory units comprises a primary non-disk  
3     persistent memory unit and a mirror non-disk persistent memory unit, and wherein  
4     the log writer is configured to first write audit trail data to the primary non-disk  
5     persistent memory unit and then write the audit trail data to the mirror non-disk  
6     persistent memory unit.

7  
8           5.     (Original)   The transaction processing system of claim 1, wherein  
9     the one or more non-disk persistent memory units comprise a write aside buffer  
10    configured to receive the audit trail data, the write aside buffer being configured as  
11    a circular buffer.

12  
13          6.     (Original)   A transaction processing system comprising:  
14       a database writer configured to process data in accordance with one or more  
15       transactions within the transaction processing system;  
16       a transaction monitor for monitoring transactions within the transaction  
17       processing system;  
18       a log writer for maintaining audit trail data associated with transactions  
19       within the transaction processing system;  
20       one or more non-disk persistent memory units associated with the log  
21       writer and configured to receive, from the log writer, audit trail data; and  
22       one or more audit log disks configured to receive audit trail data that is first  
23       received by the one or more non-disk persistent memory units.  
24  
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1           7.   (Original)   The system of claim 6, wherein the log writer is  
2 configured to cause the audit trail data in the one or more non-disk persistent  
3 memory units to be written to the one or more audit log disks when a non-disk  
4 persistent memory unit threshold is reached or exceeded.

5  
6           8.   (Original)   The system of claim 6, wherein the transaction  
7 processing system is configured to commit transactions before associated audit  
8 trail data is written to the one or more audit log disks.

9  
10          9.   (Original)   The system of claim 6, wherein the transaction  
11 processing system is configured to commit transactions after associated audit trail  
12 data is received by the one or more non-disk persistent memory units and before  
13 the associated audit trail data is written to the one or more audit log disks.

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15          10.   (Original)   The system of claim 6, wherein the log writer  
16 comprises a primary audit disk process and a backup audit disk process.

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18          11.   (Original)   The system of claim 6, wherein said one or more non-  
19 disk persistent memory units comprises a primary non-disk persistent memory unit  
20 and a mirror non-disk persistent memory unit.

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22          12.   (Original)   The system of claim 6, wherein said one or more non-  
23 disk persistent memory units comprises a primary non-disk persistent memory unit  
24 and a mirror non-disk persistent memory unit, and wherein the log writer is  
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1 configured to first write audit trail data to the primary non-disk persistent memory  
2 unit and then write the audit trail data to the mirror non-disk persistent memory  
3 unit.

4 13. (Original) The system of claim 6, wherein the one or more non-  
5 disk persistent memory units comprise a write aside buffer configured to receive  
6 the audit trail data, the write aside buffer being configured as a circular buffer.

7  
8 14. (Currently Amended) A method comprising:  
9 receiving data associated with transaction-induced state changes, wherein  
10 the act of receiving is performed by a log writer comprising primary and backup  
11 audit disk processes; and

12 writing the received data to non-disk persistent memory sufficient to  
13 commit an associated transaction.

14  
15 15. (Original) The method of claim 14, wherein the act of writing  
16 comprises writing the received data to first and second non-disk persistent  
17 memory units, the first non-disk persistent memory unit comprising a primary  
18 non-disk persistent memory unit, the second non-disk persistent memory unit  
19 comprising a mirror non-disk persistent memory unit.

20  
21 16. (Original) The method of claim 14, wherein the act of writing  
22 comprises writing the received data to first and second non-disk persistent  
23 memory units, the first non-disk persistent memory unit comprising a primary  
24 non-disk persistent memory unit, the second non-disk persistent memory unit  
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1 comprising a mirror non-disk persistent memory unit, the act of writing  
2 comprising first writing the received data to the primary non-disk persistent  
3 memory unit and then writing the received data to the mirror non-disk persistent  
4 memory unit.

5  
6 17. (Original) The method of claim 14, wherein the act of writing  
7 comprises writing the received data to first and second non-disk persistent  
8 memory units, the first non-disk persistent memory unit comprising a primary  
9 non-disk persistent memory unit, the second non-disk persistent memory unit  
10 comprising a mirror non-disk persistent memory unit, the act of writing  
11 comprising concurrently writing the received data to the primary non-disk  
12 persistent memory unit and the mirror non-disk persistent memory unit.

13  
14 18. (Cancel)

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16 19. (Original) The method of claim 14 further comprising after  
17 writing the received data to the non-disk persistent memory, writing the  
18 transaction-induced state change data to one or more audit log disks.

19  
20 20. (Original) The method of claim 14 further comprising after  
21 writing the received data to the non-disk persistent memory, writing the  
22 transaction-induced state change data to one or more audit log disks, wherein the  
23 act of writing the transaction-induced state change data to the one or more audit  
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log disks comprises doing so responsive to a threshold associated with the non-disk persistent memory being reached or exceeded.

21. (Original) A method comprising:  
maintaining at least two write aside buffers in non-disk persistent memory,  
a first of the buffers comprising a primary buffer, a second of the buffers comprising a mirror buffer;  
synchronously flushing audit data associated with one or more transactions to said at least two write aside buffers; and  
when a predetermined condition is met, writing the audit data in the write aside buffers to one or more audit log disks.

22. (Original) The method of claim 21, wherein the act of maintaining comprises maintaining said buffers as circular buffers.

23. (Original) The method of claim 21, wherein the predetermined condition comprises a threshold condition.

24. (Original) The method of claim 21, wherein said act of synchronously flushing is sufficient to commit an associated transaction.

25. (Original) The method of claim 21, wherein said acts are performed by a transaction processing system that comprises a database writer

1 component, a transaction monitor component and a log writer component, each  
2 component being implemented as a primary-backup process pair.

3  
4 26. (Cancel)

5 27. (New) A method comprising:

6 receiving data associated with transaction-induced state changes; and

7 writing the received data to non-disk persistent memory sufficient to  
8 commit an associated transaction, wherein the act of writing comprises writing the  
9 received data to first and second non-disk persistent memory units, the first non-  
10 disk persistent memory unit comprising a primary non-disk persistent memory  
11 unit, the second non-disk persistent memory unit comprising a mirror non-disk  
12 persistent memory unit.

13  
14 28. (New) A method comprising:

15 receiving data associated with transaction-induced state changes; and

16 writing the received data to non-disk persistent memory sufficient to  
17 commit an associated transaction, wherein the act of writing comprises writing the  
18 received data to first and second non-disk persistent memory units, the first non-  
19 disk persistent memory unit comprising a primary non-disk persistent memory  
20 unit, the second non-disk persistent memory unit comprising a mirror non-disk  
21 persistent memory unit, the act of writing comprising first writing the received  
22 data to the primary non-disk persistent memory unit and then writing the received  
23 data to the mirror non-disk persistent memory unit.

1           29. (New) A method comprising:  
2           receiving data associated with transaction-induced state changes; and  
3           writing the received data to non-disk persistent memory sufficient to  
4           commit an associated transaction, wherein the act of writing comprises writing the  
5           received data to first and second non-disk persistent memory units, the first non-  
6           disk persistent memory unit comprising a primary non-disk persistent memory  
7           unit, the second non-disk persistent memory unit comprising a mirror non-disk  
8           persistent memory unit, the act of writing comprising concurrently writing the  
9           received data to the primary non-disk persistent memory unit and the mirror non-  
10          disk persistent memory unit.

11  
12          30. (New) A method comprising:  
13          receiving data associated with transaction-induced state changes;  
14          writing the received data to non-disk persistent memory sufficient to  
15          commit an associated transaction; and  
16          after writing the received data to the non-disk persistent memory, writing  
17          the transaction-induced state change data to one or more audit log disks.



1           31. (New) A method comprising:  
2           receiving data associated with transaction-induced state changes;  
3           writing the received data to non-disk persistent memory sufficient to  
4           commit an associated transaction; and  
5           after writing the received data to the non-disk persistent memory, writing  
6           the transaction-induced state change data to one or more audit log disks, wherein  
7           the act of writing the transaction-induced state change data to the one or more  
8           audit log disks comprises doing so responsive to a threshold associated with the  
9           non-disk persistent memory being reached or exceeded.